BASF Wyandotte Corporation

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C. H. Holley
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July 28, 1977

Grosse Ile Township Planning Commission
Macomb Street
Grosse Ile, Michigan 48138

Attention: Mr. Rich Bohl, Chairman

Gentlemen:

I have reviewed the program for Point Hennepin outlined herein and wish to assure you that it has my full concurrence.

The sinkhole craters are highest on our priority ranking for utilization of fill material as it becomes available. The plan also recognizes concerns of the Township for utilization of some portion of this limited supply for landfill and site improvement on a lesser priority basis, and an attempt will be made by BASF Wyandotte Corporation to provide fill material for such landfill and site improvement, but only after considering such material for filling the sinkholes, subject to the availability of material at all, and there being no net increase in costs to BASF Wyandotte Corporation in so doing.

I am hereby directing that upon receipt of approval of your Commission and issuance of the necessary permits that this project move forward without delay.

Please be assured of my full support in your efforts.

Very truly yours,

C. H. Holley

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OUTLINE

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Purpose

This plan provides for development of a program and for implementation of a Master Fill Plan directed toward future restoration of the surface and upgrading the ecological aspects of Point Hennepin. It is intended that this program be implemented with maximum diligence within the limitations imposed by availability of material and costs over a period of 20 years so that every economically feasible opportunity can be utilized to move forward toward the goal of site improvement.

Scope

The project covered by this plan includes the parcel known as Point Hennepin, essentially that land north of the canal separating Hennepin from the Grosse Ile mainland and includes the following:

- Develop a topographic diagram outlining objectives and goals of the Fill and Site Development Plan.

- Initiate activities to obtain suitable material, test and monitor, and proceed to put the program into action.

- Recognize the priority of filling the sinkholes, and then, subject to availability of suitable material, and over a period of 20 years at no net cost to BASF Wyandotte Corporation, restore the surface of Point Hennepin so as to upgrade its ecological aspects.

- Recognize the need to hold periodic conferences with the Planning Commission and its consultants for progress review of the program.

Objectives

It is the objective of the program covered by this Master Fill Plan to raise Point Hennepin to a higher ecological level than its present state, being a peninsular extension of Grosse Ile composed almost entirely of industrial waste, including the sinkhole craters and lacking soil and lacking a formal program for improvement.

The initial objective is filling of the sinkhole craters -- followed in priority by development of a soil cover having adequate thickness to support vegetation and subsequent developmental activities and in a topographic configuration with minimum need for rearrangement.

The initial objective of the program recognizes that in order for the land to be usable for other purposes the craters first must be filled and stabilized.

A secondary objective of the program is the development of a suitable vegetative cover to meet the requirement that the new fill be secured from erosion and to improve esthetic aspect of the site in the period before it is placed under development for its next use. In the interim an objective of the Township Master Plan would be served if the site were provided with a soil base and vegetative cover -- development of a "green belt"

Recognizing the magnitude of this project in volume of material (estimated to be several million cubic yards) and the limited facilities of Township roads and bridges to handle these volumes without serious impact, this project is visualized to be largely restricted to barge transport and to material available for barge movement. This constraint restricts and extends the time frame within the limits of availability of suitable landfill material accessible to the waterways.

Point Hennepin - Present and Future

Point Hennepin serves as the operations base for BASF salt well activities. This salt production is one of the basic raw materials in support of the Wyandotte plants manufacturing inorganic and organic chemicals.

The Grosse Ile base for these activities includes termination of individual well pipes, meters, gages and sample stations as well as location for the power equipment serving the offshore well pumps. Because of the importance of these installations the public cannot be allowed general access. Accordingly, Hennepin will probably be reserved for BASF activities as long as salt production continues.

Trenton Channel wells have an expected life of 10-15 years depending on variables such as usage rate and production experience. These wells will be succeeded in a transitional manner by wells in the MamaJuda middleground. These wells in turn have service life related to the Wyandotte location plants, presumably in excess of 20 years.

Concurrently, new wells on the Lighthouse site serve as mainland support for offshore wells in either area in the event of winter breakdown when access is precluded due to ice conditions. Their life will be protracted by reserved use through the extent of both sites.

Based on the above, Hennepin will be the base of BASF offshore activities into the distant future. This is not to say that either or both of the landfill projects (upland cover and sinkhole fill) cannot be carried to completion concurrently.

Ultimate disposition upon termination of salt operations will depend on interests apparent at that time. Conceivably the projects described above will be completed and vegetative cover established by that time, assuming of course material has been available under the terms and conditions of the Master Fill Plan.

Project Outline

Following are descriptions of the major projects to be undertaken. Responsibility is indicated as B-BASF, C-Consultants and T-Township. Listed in approximate time sequence.

Topographic Diagram & Site Plan (BCT)
Prepare site fill plan and topographic diagram showing proposed fill and ultimate topography. Diagram is required for Sedimentation and Erosion Control Permit (PL 346) and must also show provision for control of runoff and erosion control to conform to the requirements of this permit.

This diagram serves as the Master Plan for the project. It must be prepared with the major aspects of the project in mind and be broad enough in scope to cover as many future uses as possible.

Review and revisions (BCT) to be made periodically to update and to provide for new concepts in land use and reclamation.

Material Procurement, Sampling & Testing (BCT)
Since progress of the project is dependent on material availability, early efforts should be directed to discovering, investigating, sampling and testing materials suitable for this work.

It is visualized at this time that dredging spoils from the Detroit River and adjacent waterways constitutes the principal material in terms of availability, barge delivery and soil characteristics. Since maintenance dredging is an activity limited to periods of lowering lake levels (the term "lessening drafts" recognizes lowering of levels and rising of bottoms due to sedimentation even in periods of high lake levels), provision should be made to handle this type of material from a variety of sources and to designate areas to be filled if character of material has input into this decision. Provision should also be made for material from other sources having suitable characteristics by providing for definition, sampling, testing, and approval for project use.

Prioritizing & Sequence Scheduling (BCT)
Since fill placement, topographic development, and final vegetation and erosion control activities are dependent upon availability of material, consideration should be given to designated areas deserving priority for maximum early benefit, minimization of transport and simplification of erosion control.

SCHEDULE

(Time from Inception)

I. Site Plan and Topographic Diagram

Prepare Site Plan - Obtain Concurrences (BCT)	Months 1-6
Prepare Topographic Diagram (BC)	Months 1-6
Designate Sequence - Priorities (BCT)	Months 1-6

II. Initiate Permit Requests (B) — Months 7-12

III. Initiate Fill Projects

Maintain & Renew Permits (B)	Continuing
Review Progress, Conformity to Plan (BCT)	Annual
Report to Planning Commission & Supervisor (BC)	Annual

(B - BASF, C - Consultants, T - Township)

Suggested Sequence of Activities

Following are listed a suggested sequence or priority ranking of activities utilizing fill material as and if it becomes available at no net cost to BASF Wyandotte Corporation recognizing materials of varying quality in this distribution.

Sinkhole Fill Activity

Recognizing that sinkhole craters will be filled from bottom up and that 95% of material will be placed submerged and is thus highly tolerant of quality variations and delivery volumes, fill material of a general class acceptable to the permitting agencies can be used for this service.

In accordance with the Soil Erosion and Sedimentation Control Permit (PL 347), last sinkhole fill (surfacing) must be of surfacing quality, graded, protected from erosion and placed in accordance with a fill plan approved by the Wayne County Department of Health. This last material to be placed, or any constituting banks or slopes, being subject to erosion, must be of higher quality and capable of developing and supporting vegetative cover.

Landfill Projects

Visibility Areas I - Visible from Parke Lane and Meridian Road residential area. Examples are the Lighthouse site, canal banks, etc. Restricted to material of no detrimental characteristics (odor, dust, etc.).

Visibility Areas II - Visible from boats, mainland, etc., remote from Areas I above. Tolerance for lower class of acceptable material due to distance from residential area. Area deserving of visibility improvement priority.

Other Sites III - Lowlands, areas needing soil cover ranking in merit below I and II above.

Site Improvement Areas IV - Sites presently having soil cover adequate for minimum vegetation but subject to increased cover depth where material becomes available.

Annual Review & Report (BC)
It is proposed that an annual report will be made to the Township Planning Commission and the Supervisor transmitting and reporting:

1. Status of project, conformity or digression from Plan with explanation for digression.*
2. Quantity of material placed.
3. Progress to date in percent of area, estimated total volume rates or other.
4. Plans for coming year.
5. Request for concurrence or other direction.

*Assumes prior approval of digression obtained from Commission and Consultants.

References

1.) "Point Hennepin - A Study of Development Potential"
J.J.& R, March 1973

- Soil Analysis - J.J.R. & Smith, Hynchman & Grylls
- Soil Borings Exploration Report - Michigan Drilling Co.
- Composite Log, Corehole No. 2 Grosse Ile - BASF Corp.

2.) "Effect Upon Environment of Brine Cavity Subsidence at Grosse Ile, Michigan, 1971" K. K. Landes & T. B. Piper, Solution Mining Research Institute, Inc., Chicago, 1972.

3.) "Final Environmental Statement: Maintenance Dredging of the Federal Navigational Channels, Rouge River, Michigan" U.S. Army Engineer District - Detroit, Michigan. 1976